Docket: MA9658DIV1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

plication of: /
Fraser et al. / Group Art Unit: 3731

Serial No: 10/614,431

Filed: July 7, 2003 / Examiner: unknown

FOR: SYSTEMS AND METHODS FOR TREATING PATIENTS WITH

PROCESSED LIPOASPIRATE CELLS

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450 I hereby certify that this correspondence is being deposited with the United States Postal Service, First Class mail, postage prepaid, in an envelope addressed to Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on June 23, 2004.

STOUT, UXA, BUYAN & MULLINS, LLP

Kenton R. Mullins, Reg. No. 36,331

TRANSMITTAL

Sir:

Submitted herewith are

- ~ Return Receipt postcard;
- ~ Information Disclosure Statement;
- ~ PTO-1449 21 Sheets;
- ~ The Commissioner is hereby authorized to charge any needed fees to deposit account 50-1600.

Respectfully submitted,

Kenton R. Mullins Attorney for Applicants Reg. No. 36,331

June 23, 2004 4 Venture, Suite 300 Irvine, CA 92618

Telephone: (949) 450-1750 Facsimile: (949) 450-1764

THE UNITED STATES PATENT AND TRADEMARK OFFICE

| In re Application of: | |
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STOUT, UXA, BUYAN & MULLINS, LLP

Kenton R. Mullins, Reg. No. 36,331

INFORMATION DISCLOSURE STATEMENT

Sir:

In accordance with 37 C.F.R. 1.56 and 1.97, Applicants wish to call the attention of the Examiner to the references that are listed on the attached PTO form 1449. In accordance with 37 .F.R. section 198(d)(1)(2), copies of all 291 references in the enclosed PTO form 1449 are not provided as they have previously been provided in U.S. Serial No. 10/316,127 filed December 9, 2002, for which the subject application claims priority

Applicants respectfully request that the cited references be listed on the face of any patent issuing from this application.

These citations do not constitute an admission that the references are relevant or material to the claims, but rather only constitute the closest art of which Applicants are presently aware.

Respectfully Submitted

Kenton R. Mullins Attorney for Applicants Registration No. 36,331

June 23, 2004 4 Venture, Suite 300 Irvine, CA 92618 949-450-1750

| | | | | | Docket Number (Optional) MA9658D1 | | Application Number | | |
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| INFORMATION DISCLOSURE CITATION | | | | Applicant(s) | | | | | |
| | | (Use several sheets if necessar | | | Fraser et al. | 10 | Group Art Unit | | |
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| | | The state of the s | DATE | U.S. PAT | ENT DOCUMENTS | | | | |
| EXAMINER INITIAL | REF | DOCUMENT NUMBER | DATE | | NAME | CLASS | SUBCLASS | FILING IF APPRO | |
| | | 6,200,606 | 03/13/2001 | Peterso | n et al. | | | | |
| | | 5,035,708 | 07/20/1991 | Alchas e | et al. | | | | |
| | | 5,372,945 | 12/13/1994 | Alchas e | et al. | | | | |
| | | 5,786,207 | 07/28/1998 | Katz et | al. | | | | |
| | | 4,820,626 | 04/11/1989 | William | s et al. | | | | |
| | | 4,883,755 | 11/28/1989 | Carabas | si et al. | | · | | |
| | | 5,486,359 | 01/23/1996 | Caplan | et al. | | | | |
| | 4,458,678 07/10/1984 | | Yannas | et al. | | | | | |
| | | 5,837,235 | 11/17/1998 | Mueller | et al. | | | | |
| | | 5,409,833 | 04/25/1995 | Hu et al. | • | | | | |
| | | 6,316,247 | 11/13/2001 | Katz et : | al. | | | | |
| · | | | | FOREIGN | PATENT DOCUMENTS | | | | |
| | REF | DOCUMENT NUMBER | DATE | | COUNTRY | CLASS | SUBCLASS | Transl YES | ation NO |
| | | EP0570331 | 11/18/1993 | Europe | | | | | |
| - | | WO8702812 | 07/11/1987 | WIPO | | | | | |
| | | WO8601111 | 02/27/1986 | WIPO | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | ate, Pertinent Pag | es, Etc.) | |
| | | U.S. Application No. 09/9 | 936,665, filed 9/1 | 0/2001, Ka | tz et al., Adipose-Derived S | stem Cells a | nd Lattices | | |
| | | | | | | | | | |
| | U.S. Application No. 09/952,522, filed 9/10/2001, Katz et al., Adipose-Derived Stem Cells and Lattices | | | | | | | | |
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INFORMATION DISCLOSURE CITATION

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| Docket Number (Optional) | Application Number | | |
|--------------------------|--------------------|--|--|
| MA9658D\J1 | | | |
| Applicant(s) | | | |
| Fraser et al. | | | |
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| | 111103 | | | | | | |
|----------------------|--|--|--|--|--|--|--|
| *EXAMINER INITIAL | OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) | | | | | | |
| , , | Avital, I., D. Inderbitzin, et al. (2001). "Isolation, characterization, and transplantation of bone marrow-derived hepatocyte stem cells." Biochem Biophys Res Commun 288(1): 156-64. | | | | | | |
| , | Carmeliet, P. and A. Luttun (2001). "The emerging role of the bone marrow-derived stem cells in (therapeutic) angiogenesis." Thromb Haemost 86(1): 289-97. | | | | | | |
| | Castro-Malaspina, H., W. Ebell, et al. (1984). "Human bone marrow fibroblast colony-forming units (CFU-F)." Prog Clin Bio Res 154: 209-36. | | | | | | |
| | Coleman, S. R. (1995). "Long-term survival of fat transplants: controlled demonstrations." Aesthetic Plast Surg 19(5): 421-5. | | | | | | |
| | Coleman, S. R. (2001). "Structural fat grafts: the ideal filler?" Clin Plast Surg 28(1): 111-9. | | | | | | |
| | Coleman, W. P., 3rd (1991). "Autologous fat transplantation." Plast Reconstr Surg 88(4): 736. | | | | | | |
| | Connolly, J. F. (1998). "Clinical use of marrow osteoprogenitor cells to stimulate osteogenesis." Clin Orthop(355 Suppl): S257-66. | | | | | | |
| | Eremia, S. and N. Newman (2000). "Long-term follow-up after autologous fat grafting: analysis of results from 116 patients followed at least 12 months after receiving the last of a minimum of two treatments." Dermatol Surg 26(12): 1150-8. | | | | | | |
| | Fukuda, K. (2001). "Development of regenerative cardiomyocytes from mesenchymal stem cells for cardiovascular tissue engineering." Artif Organs 25(3): 187-93. | | | | | | |
| | Guerrerosantos, J., A. Gonzalez-Mendoza, et al. (1996). "Long-term survival of free fat grafts in muscle: an experimental study in rats." Aesthetic Plast Surg 20(5): 403-8. | | | | | | |
| | Horwitz, E. M., D. J. Prockop, et al. (1999). "Transplantability and therapeutic effects of bone marrow-derived mesenchymal cells in children with osteogenesis imperfecta." Nat Med 5(3): 309-13. | | | | | | |
| | Horwitz, E. M., D. J. Prockop, et al. (2001). "Clinical responses to bone marrow transplantation in children with severe osteogenesis imperfecta." Blood 97(5): 1227-31. | | | | | | |
| EXAMINER | DATE CONSIDERED | | | | | | |
| | | | | | | | |

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

| Docket Number (Optional) | Application Number |
|--------------------------|--------------------|
| MA9658D1U | 10/6/4,431 |
| Applicant(s) | |
| Fraser et al. | |
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| 7/7/03 | 7771 |

| | | Filing Date 7/7/03 . | Group Art Unit 3731 | | |
|----------------------|---|---|--|--|--|
| *EXAMINER INITIAL | OTHER DOCUMENTS (Including Au | thor, Title, Date, Pertinent Pages, Etc.) | | | |
| | Huang, J. I., S. R. Beanes, et al. (2002). "Ra Plast Reconstr Surg 109(3): 1033-41; discus | it extramedullary adipose tissue as a sour ision 1042-3. | ce of osteochondrogenic progenitor cell | | |
| | Hutley, L. J., A. C. Herington, et al. (2001). J Physiol Endocrinol Metab 281(5): E1037- | "Human adipose tissue endothelial cells 44. | promote preadipocyte proliferation." A | | |
| | Kern, P. A., A. Knedler, et al. (1983). "Isola Invest 71(6): 1822-9. | ntion and culture of microvascular endoth | elium from human adipose tissue." J C | | |
| | Lee, J. H., Z. Ilic, et al. (1996). "Cell kinetic 77(2): 63-72. | s of repair after allyl alcohol-induced live | er necrosis in mice." Int J Exp Pathol | | |
| | Lee, P. E., R. C. Kung, et al. (2001). "Perius a randomized double-blind controlled trial." | rethral autologous fat injection as treatmo ' J Urol 165(1): 153-8. | ent for female stress urinary incontinen | | |
| | Mizuno, H., P. A. Zuk, et al. (2002). "Myog 109(1): 199-209; discussion 210-1. | enic differentiation by human processed l | ipoaspirate cells." Plast Reconstr Surg | | |
| | Murayama, T., O. M. Tepper, et al. (2002). angiogenic growth factor-induced neovascul | "Determination of bone marrow-derived larization in vivo." Exp Hematol 30(8): 90 | endothelial progenitor cell significance 67-72. | | |
| | Murry, C. E., R. W. Wiseman, et al. (1996). Invest 98(11): 2512-23. | "Skeletal myoblast transplantation for re | epair of myocardial necrosis." J Clin | | |
| | Muschler, G. F., H. Nitto, et al. (2001). "Age prevalence of osteoblastic progenitors." J O | e- and gender-related changes in the cellu rthop Res 19(1): 117-25. | larity of human bone marrow and the | | |
| | Nishimori, M., Y. Yamada, et al. (2002). "H 99(6): 1995-2001. | ealth-related quality of life of unrelated b | one marrow donors in Japan." Blood | | |
| | Orlic, D., J. Kajstura, et al. (2001). "Transplanted adult bone marrow cells repair myocardial infarcts in mice." Ann N Y Acad Sci 938: 221-9; discussion 229-30. | | | | |
| | Orlic, D., J. Kajstura, et al. (2001). "Bone m | narrow cells regenerate infarcted myocard | dium.'' Nature 410(6829): 701-5. | | |
| AMINER | | DATE CONSIDERED | | | |

*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

not considered. Include copy of this form with next communication to applicant.

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|----------------------------|--------------------|--|--|
| MA9658D1U/ | 10/614,431 | | |
| Applicant(s) Fraser et al. | , | | |
| Filing Date | Group Art Unit | | |

| *EXAMINER INITIAL | OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) | | | |
|----------------------|--|--|--|--|
| | Palma, P. C., C. L. Riccetto, et al. (1997). "Repeated lipoinjections for stress urinary incontinence." J Endourol 11(1): 67-70. | | | |
| | Pittenger, M. F., A. M. Mackay, et al. (1999). "Multilineage potential of adult human mesenchymal stem cells." Science 284(5411): 143-7. | | | |
| - | Prockop, D. J., S. A. Azizi, et al. (2000). "Potential use of marrow stromal cells as therapeutic vectors for diseases of the central nervous system." Prog Brain Res 128: 293-7. | | | |
| | Rajnoch, C., J. C. Chachques, et al. (2001). "Cellular therapy reverses myocardial dysfunction." J Thorac Cardiovasc Surg 121(5): 871-8. t&artType=abs&id=a112937⌖=. | | | |
| | Shi, Q., S. Rafii, et al. (1998). "Evidence for circulating bone marrow-derived endothelial cells." Blood 92(2): 362-7. | | | |
| | Strauer, B. E., M. Brehm, et al. (2002). "Repair of infarcted myocardium by autologous intracoronary mononuclear bone marrow cell transplantation in humans." Circulation 106(15): 1913-8. | | | |
| | Takahashi, T., C. Kalka, et al. (1999). "Ischemia- and cytokine-induced mobilization of bone marrow-derived endothelial progenitor cells for neovascularization." Nat Med 5(4): 434-8. | | | |
| | Thomas, E. D. (1994). "Stem Cell Transplantation: Past, Present and Future." Stem Cells 12: 539-544. | | | |
| | Werlich, T., K. J. Stiller, et al. (1999). "Experimental studies on the stem cell concept of liver regeneration. II." Exp Toxicol Pathol 51(1): 93-8. | | | |
| | Yavorkovsky, L., E. Lai, et al. (1995). "Participation of small intraportal stem cells in the restitutive response of the liver to periportal necrosis induced by allyl alcohol." Hepatology 21(6): 1702-12. | | | |
| | Yin, L., D. Lynch, et al. (1999). "Participation of different cell types in the restitutive response of the rat liver to periportal injury induced by allyl alcohol." J Hepatol 31(3): 497-507. | | | |
| | Zuk, P. A., M. Zhu, et al. (2001). "Multilineage cells from human adipose tissue: implications for cell- based therapies." Tissue Eng 7(2): 211-28. | | | |
| EXAMINER | DATE CONSIDERED | | | |

P09B/REV04

*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and

| FORM 1449* | Docket Number | Application Number |
|-----------------------------------|---------------|--------------------|
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| INFORMATION DISCLOSURE STATEMENT | Applicant | |
| IN AN APPLICATION Fraser et al. | | |
| | Filing Date | Group Art Unit |
| (Use several sheets if necessary) | 7/7/03 | 3731 |

| | | U.S. PA | TENT DOCUMENTS | 3 | | |
|---------------------------------------|--|---|--|--|--|---|
| EXAMINER INITIAL | DOCUMENT NO. | DATE | NAME | CLASS | SUBCLASS | FILING DATE IF APPROPRIATE |
| - | 5,486,359 | January 23, 1996 (EXHIBIT 1) | Caplan, et al. | | | |
| | 5,728,739 | March 17, 1998 (EXHIBIT 2) | Ailhaud et al. | | | |
| | 5,827,740 | October 27, 1998 (EXHIBIT 3) | Pittenger | | | |
| | 5,827,897 | October 27, 1998 (EXHIBIT 4) | Ailhaud, et al. | | · | |
| · · · · · · · · · · · · · · · · · · · | | FOREIGN | PATENT DOCUMEN | its | | |
| | DOCUMENT NO. | DATE | COUNTRY | CLASS | SUBCLASS | TRANSLATION YES NO |
| | WO 98/04682 | February 5, 1998 (EXHIBIT 5) | US | | | |
| | OTHE | R DOCUMENTS (Includ | ing Author, Title, Date | , Pertinent Pag | es, Etc.) | |
| | Considine, et al., "Paracrine st American Journal of Physiolo Dani, et al., "Differentiation o 1279-1285 (EXHIBIT 7) Entermann, et al., "Relationsh precursor cells," American Ph Eslami Varzaneh, et al., "Extr Stimulate Preadipocyte Differ Hauner, et al., "Endothelin-1 l Precursor Cells," Metabolism Hausman, et al., "The Influence Serum-Free Cultures of Strom Hui-Ling et al., "Increased ex differentiation to adipocytes," (EXHIBIT 12) Marko, et al., "Isolation of a I Adipocytes," Endocrinology Shillabeer, et al., "A novel me | | ip between replication vs. Soc. 1996 270, C10 acellular Matrix Compentiation In Vitro," Mnhibits the Adipose D1994 43(2) pp 227-23 are of Extracellular Maal-Vascular Cells," J. Dression of G in mountain Manal-Vascular Cell Line 1995 136(10), 4582-42 thod for studying pre- | E899 (EXHIB s into adipocyte n and differentia 11-C1016 (EXI ponents Secrete etabolism 1994 Differentiation o 12 (EXHIBIT 1 atrix Substrata o Anim.Sci. 1996 ase embryo stem cal Society 1996 from Rat Bone 588 (EXHIBIT | IT 6) Is in vitro," J. Cell Is in vitro," J. Cell Is in vitro," J. Cell It in cultured hu HIBIT 8) It is downward It is in vitro," J. Cell It is downward It is in vitro," J. Cell It is in vit | man adipocyte lar Endothelial Cells (EXHIBIT 9) an Adipocyte Development in 28 (EXHIBIT 11) terminal -C1735 |
| | Sorisi Cell S | 20(Supp. 3), S77-S83 (E ky et al., "From preadipo Surface to the Nucleus," IIBIT 15) | cyte to Adipocyte: Di | ifferentiation-D inical Laborato | irected Signals o ry Sciences 1999 | f Insulin from the 36(1), 1-34 |

DATE CONSIDERED XAMINER

XAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form for next communication to the Applicant.

*Substitute Disclosure Statement Form (PTO-1449) Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

| ORM 1449* | Docket Number | Application Number | |
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| INFORMATION DISCLOSURE STATEMENT | Applicant | | |
| IN AN APPLICATION | Fraser et al. | | |
| | Filing Date | Group Art Unit | |
| (Use several sheets if necessary) | 7/7/03 | 3731 | |

| | OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) |
|-------------|--|
| | Vassaux, et al., "Proliferation and differentiation of Rat Adipose Precursor Cells in Chemically Defined Medium: Differential Action of Anti-Adipogenic Agents," <i>Journal of Cellular Physiology</i> 1994 161(2), 249-256 (EXHIBIT 16) |
| | Wabitsch, et al., "Biological Effects of Human Growth Hormone in Rat Adipocyte Precursor Cells and Newly Differentiated Adipocytes in primary Culture," <i>Metabolism</i> 1996 Vol 45, No. 1 pp34-42 (EXHIBIT 17) |
| | Young et al., "Mesenchymal Stem Cells Reside Within the Connective Tissues of Many Organs," Developmental Dynamics 1995 202(2), 137-144 (EXHIBIT 18) |
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|--|---------------------------|--------------------|--|--|
| INFORMATION DISCLOSURE STATEMENT IN AN APPLICATION | Applicant Fraser et al. | | | |
| (Use several sheets if necessary) | Filing Date 7/7/03 | Group Art Unit | | |

| | | U.S. PA | TENT DOCUMENTS | | | | |
|------------------|---|--|------------------------|---------------------------------|-------------------------------------|--------------------------------|-------------|
| EXAMINER INITIAL | DOCUMENT NO. | DATE | NAME | CLASS | SUBCLASS | FILING DA | |
| | 5,591,625 | January 7, 1997 | Gerson, et al. | | | | |
| | (Exhibit 19) | | | | | | |
| | 5,786,207 | July 28, 1998 | Katz, et al. | | | | |
| • | (Exhibit 20) | | | | | | |
| | 5,827,735 | October 27, 1998 | Young, et al. | | | 1 | |
| | (Exhibit 21) | | | | | | |
| | 5,827,740 | October 27, 1998 | Pittenger | | | | |
| | (Exhibit 22) | | | | | | |
| | 5,906,934 | May 25, 1999 | Grande, et al. | | · | | |
| | (Exhibit 23) | | | | | | |
| | 5,908,784 | June 1, 1999 | Johnstone et al. | | | | |
| | (Exhibit 24) | • | | | | | |
| · | 6,200,606 B1 | March 13, 2001 | Peterson, et al. | | | | |
| Í. | (Exhibit 25) | | | | | | |
| | | FOREIGN | PATENT DOCUMEN | | | , | |
| | DOCUMENT NO. | DATE | COUNTRY | CLASS | SUBCLASS | TRANSLA | |
| | · | | | | | YES | NO |
| | | R DOCUMENTS (Includ | | | | | |
| | Benne | ett, JH, et al., 1991 J. Cel | Il Sci. "Adipocytic ce | lls cultured fron | n marrow have o | steogenic pote | ntial," |
| <u> </u> | 99(Pt | 1):131-139 (Exhibit 26) ford, et al., 1986 <i>Endo.</i> " | 1.25- Dihydroxyvitai | min D ₁ and Hun | nan Bone-Derive | d Cells in Vitre | o: |
| | Effect | ts on Alkaline Phosphata | se. Type I Collagen a | ind Proliferation | ւ" 119:1 <u>776-178</u> | 5 (Exhibit 27) |) |
| | Bjomson, et al., 1999 Science "Turning Brain into Blood: A Hematopoetic Fate Adopted by Adult | | | | | | |
| | Neural Stem Cells in Vivo," 283:534-537 (Exhibit 28) Bruder, et al., 1997 J. Cell Biochem. "Growth Kinetics, Self-Renewal, and the Osteogenic Potential of | | | | | | |
| | Purified Human Mesenchymal Stem Cells During Extensive Subcultivation and Following | | | | | | |
| | Cryopreservation," 64:278-294 (Exhibit 29) Butler-Browne, et al., 1990 Anat. Embryol. (Berl) "Myosin heavy and light chain expression during | | | | | | |
| | huma | n skeletal muscle develo | pment and precociou | s muscle matura | tion induced by | thyroid hormo | ne," |
| | 181:5 | 13-522 (Exhibit 30) | | | | | |
| | Chen | g S-L., et al., 1994 Endo : Induction of the Osteob | "Differentiation of H | luman Bone Ma •xamethasone " | irrow Osteogenia 134: 277-286 (E | s Stromai Cells Skhibit 31) | in |
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| FORM 1449* | MA9658DIVI Application Number 10/6/4,43/ | | | |
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| INFORMATION DISCLOSURE STATEMENT IN AN APPLICATION | Applicant Fraser et al. | | | |
| (Use several sheets if necessary) | Filing Date 7/7/03 | Group Art Unit 373(| | |

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) Chyun, et al., 1984 Endo. "Cortisol Decreases Bone Formation by Inhibiting Periosteal Cell Proliferation," 114:477-480 (Exhibit 32) Conget, PA and JJ Minguell 1999 J. Cell. Physiol "Phenotypical and Functional Properties of Human Bone Marrow Mesenchymal Progenitor Cells," 181:67-73 (Exhibit 33) Cooper, et al., 1999 J. Endocrinol. "Glucocorticoid activity, inactivity and the osteoblast," 163:159-164 (Exhibit 34) Denker, A.E., et al., 1995 Differentiation "Formation of cartilage-like spheroids by micromass cultures of murine C3H101/2 cells upon treatment with transforming growth factor-\(\beta_1\)," 59: 25-34 (Exhibit 35) Denker, et al., 1999 Differentiation "Chondrogenic differentiation of murine C3H10T1/2 multipotential mesenchymal cells: I. Stimulation by bone morphogenetic protein-2 in high-density micromass cultures," 64:67-76 (Exhibit 36) Dimri, et, al., 1995 Proc. Natl. Acad. Sci. USA "A biomarker that identifies a senescent human cells in culture and in aging skin in vivo," 92: 9363-9367 (Exhibit 37) Ducy, et, al., 1997 Cell "Osf2/Cbfa1: A Transcriptional Activator of Osteoblast Differentiation," 89:747-754 (Exhibit 38) Ferrari G., et al., 1998 Science "Muscle Regeneration by Bone Marrow-Derived Myogenic Progenitors," 279: 1528-1530 (Exhibit 39) Frederikson and McKay 1988 J. Neurosci. "Proliferation and Differentiation of Rat Neuroepithelial Precursor Cells in vivo," 8:1144-1151 (Exhibit 40) Fridman, et al., 1992 Int. J. Cancer "Malignant Transformation of NIH-3T3 Cells After Subcutaneous co-Injection With A Reconstituted Basement Membrane (Matrigel)," 5/(5), 740-44 (Exhibit 41) Grigoradis A., et al., 1988 J. Cell Biol. "Differentiation of Muscle, Fat, Cartilage, and Bone from Progenitor Cells Present in a Bone-derived Clonal Cell Population: Effect of Dexamethasone," 106: 2139-2151(Exhibit 42) Guerriero, V and JR Florini 1980 Endocrinology "Dexamethasone Effects on Myoblast Proliferation and differentiation," 106:1198-1202(Exhibit 43) Hall, BK 1981 "Intracellular and extracellular control of differentiation of cartilage and bone," Histochem. J. 13:599-614(Exhibit 44) Jaiswal, et al., 1997 "Osteogenic Differentiation of Purified, Culture-Expanded Human Mesenchymal Stem Cells In Vitro," J. Cell Biochem. 64:295-312(Exhibit 45) Johnstone B., et al., 1998 "In Vitro Chondrogenesis of Bone Marrow-Derived Mesenchymal Progenitor Cells," Exp. Cell Res. 238: 265-272(Exhibit 46) Kania, et al., 1990 "The Drosophila segmentation gene runt encodes a novel nuclear regulatory protein that is also expressed in the developing nervous system," Genes Dev. 4:1701-1713(Exhibit 47) Kehlen, A. et al., 2000 J. Cell Biochem. "Increased Lymphocytic Aminopeptidase N/CD13 Promoter Activity After Cell-Cells Contact," 80:115-123(Exhibit 48) Kosher, RA, et al., 1986 J. Cell Biol. "Collagen Gene Expression During Limb Cartilage Differentiation," 102:1151-1156(Exhibit 49) Kuri-Harcuch, W. et al., 1984, Differentiation "Extracellular matrix production by mouse 3T3-F442A cells during adipose differentiation in culture," 28(Exhibit 50) Lanier, L.L. et al, 1991 J. Immunol. "Molecular and Functional Analysis of Human Natural Killer Cell-Associated Neural Cells Adhesion Molecule (N-Cam/CD56),"146:4421-4426(Exhibit 51) Lawson-Smith, M.J. and McGeachie, J.K. 1998 J. Anat. "The identification of myogenic cells in skeletal muscle, with emphasis on the use of tritiated thymidine autoradiography and desmin antibodies," 192:161-171 (Exhibit 52)

| XAMINER DATE CONSID | DERED |
|---------------------|-------|
|---------------------|-------|

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form for next communication to the Applicant.

^{*}Substitute Disclosure Statement Form (PTO-1449) Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

| FORM 1449* | Docket Number Application Number 10/6/4, 431 | | | |
|--|--|---------------------|--|--|
| INFORMATION DISCLOSURE STATEMENT IN AN APPLICATION | Applicant Fraser et al. | | | |
| (Use several sheets if necessary) | Filing Date 7/7/02 | Group Art Unit 3731 | | |

| OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) |
|---|
| Leboy, et al., 1991 J. Cell Physiol. "Dexamethasone Induction of Osteoblast mRNAs in Rat Marrow Stromal Cell Cultures," 146:370-378 (Exhibit 53) |
| Lendahl, et al., 1990 Cell "CNS Stem Cells Express a New Class of Intermediate Filament Protein," 60:585-595 (Exhibit 54) |
| Lenoir, N. 2000 Science "Europe Confronts The Embryonic Stem Cell Research Challenge," 287:1425-1427 (Exhibit 55) |
| Lumelsky, N., et al. 2001 Science "Differentiation of Embryonic Stem Cells to Insulin-Secreting Structures Similar to Pancreatic Islets," 292:1389-1394. (Exhibit 56) |
| Lynch, et al., 1995, Exp. Cell Res. "The Influence of Type I Collagen on the Development and Maintenance of the Osteoblast Phenotype in Primary and Passaged Rat Calvarial Osteoblasts: Modification of Expression of Genes Supporting Cell Growth, Adhesion, and Extracelluar Matrix Mineralization," 216:35-45 (Exhibit 57) |
| Malaval, et al., 1994 J. Cell. Physiol. "Cellular Expression of Bone-Related Proteins During In Vitro Ostegenesis in Rat Bone Marrow Stromal Cell Culture," 158:555-572 (Exhibit 58) |
| Manduca, et al., 1992 Eur. J. Cell Biol. "Chondrogenic differentiation in chick embryo osteoblast cultures," 57:193-201 (Exhibit 59) |
| Martin, et al., 1999 Exp. Cell Res. "Mammalian Chondrocytes Expanded in the Presence of Fibroblast Growth Factor 2 Maintain the Ability to Differentiate and Regenerate Three-Dimensional Cartilaginous Tissue," 253:681-688 (Exhibit 60) |
| Megeney, et al., 1996 Genes Dev. "MyoD is required for myogenic stem cell function in adult skeletal muscle," 10:1173-1183 (Exhibit 61) |
| Molkentin and Olson 1996 Curr. Opin. Genet. Dev. "Defining the regulatory networks for muscle development," 6:445-453 (Exhibit 62) |
| Mundlos, et al., 1997 Cell "Mutations Involving the Transcription Factor CBFA12 Cause Cleidocranial Dysplasia," 89:773-779 (Exhibit 63) |
| Nehls, A. and D Drenckhahn 1991 J. Cell Biol. "Heterogeneity of Microvascular Pericytes for Smooth Muscle Type Alpha-Actin," 113:147-154 (Exhibit 64) |
| Owen, TA, et al., 1990 J. Cell Physiol. "Progressive Development of the Rat Osteoblast Phenotype in Vitro: Reciprocal Relationships in Expression of Genes Associated with Osteoblast Proliferation and Differentiation During Formation of the Bone Extracellular Matrix," 143:420-430 (Exhibit 65) |
| Paul S.R., et al., 1991 Blood "Stromal Cell-Associated Hematopoiesis: Immortalization and Characterization of Primate Bone Marrow-Derived Stromal Cell Line," 77: 1723-33 (Exhibit 66) |
| Pittenger M.F., et al., 1999 Science "Multilineage Potential of Adult Human Mesenchymal Stem Cells," 284: 143-147 (Exhibit 67) |
| Prockop D.J. 1997 Science "Marrow Stromal Cells as Stem Cells for Nonhematopoietic Tissues," 276: 71-74 (Exhibit 68) |
| Rando, et al., 1995 Exp. Cell Res. "The Fate of Myoblasts Following Transportation into Mature Muscle," 220:383-389 (Exhibit 69) |
| Saalbach, A., et al., 1997 Cell and Tiss. Res. "The Fibroblast-specific MAb ASO2: a novel tool for detection and elimination of human fibroblasts," 290:593-599 (Exhibit 70) |
| Sanchez-Ramos, et al., 2000 "Adult Bone Marrow Stromal Cells Differentiate into Neural Cells in Vitro." Exp. Neurol. 164:247-256 (Exhibit 71) |
| Seale and Rudnicki 2000 Dev. Biol. "A New Look at the Origin, Function, and "Stem-Cell" Status of Muscle Satellite Cells," 218:115-124 (Exhibit 72) |

| EXAMINER | DATE CONSIDERED |
|---|--|
| EXAMINER: Initial if reference considered, whether or not citation is | in conformance with MPEP 609; draw line through citation if not in |
| conformance and not considered. Include conv of this form for next | communication to the Applicant. |

^{*}Substitute Disclosure Statement Form (PTO-1449) Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

| FORM 1449* | Docket Number MA9658DIUI Applicant Fraser et al. Application Number 10/6/4, 431 | | | |
|--|--|----------------|--|--|
| INFORMATION DISCLOSURE STATEMENT IN AN APPLICATION | | | | |
| (Use several sheets if necessary) | Filing Date 7/7/03 | Group Art Unit | | |

| | OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) |
|---|---|
| | Shukunami, C., et al., 1998 Exp. Cell Res. "Sequential Progression of the Differentiation Program by Bone Morphogenetic Protein-2 in Chondrogenic Cell Line ATDC5," 241:1-11 (Exhibit 73) |
| | Shukunami C., et. al., 1996 Journ. Of Cell Bio. "Chrondrogenic Differentiation of Clonal Mouse Embryonic Cell Line ATDC5 In Vitro: Differentiation-dependent Gene Expression of Parathyroid Hormone (PTH)/PTH-related Peptide Receptor," 133:2:457-468 (Exhibit 74) |
| | Silberstein, L., et al., 1986 Cell "Developmental Progression of Myosin Gene Expression in Cultured Muscle Cells," 46:1075-1081 (Exhibit 75) |
| | Suga, S., et al., 1996, "Eur. J. Cell Biol. "Intracellular localization of antigens recognized by anti- vimentin monoclonal antibodies (mAbs): Cross-reactivities of anti-vimentin mAbs with other cellular components 70:84-91 (Exhibit 76) |
| | Tacchetti, C, et al., 1992 Exp Cell Res. "Cell Condensation in Chondrogenic Differentiation," 200:26-33 (Exhibit 77) |
| | Tapscott, et al., 1988 Science "MyoD1: A Nuclear Phosphoprotein Requiring a Myc Homology Region to Convert Fibroblasts to Myoblasts," 242:405-411 (Exhibit 78) |
| | Thornell, et al., 1984 J. Neurol. Sci. "Development of Fiber Types in Human Fetal Muscle," 66:107-115 (Exhibit 79) |
| | Totonoz, et al., 1995 Nucl. Acid Res "mPPARy2: tissue-specific regulator of an adipocyte enhancer," (Exhibit 80) |
| | Tsonis and Goetinck 1990 Exp. Cell Res. "Cell Density Dependent Effect of a Tumor Promoter on Proliferation and Chondrogenesis of Limb Bud Mesenchymal Cells," 190:247-253 (Exhibit 81) |
| | von der Mark, et al., 1977 Nature "Relationship between cell shape and type of collagen synthesised as chondrocytes lose their cartilage phenotype in culture," 267:531-532 (Exhibit 82) |
| | Vukicevic et al., 1992 Exp. Cell Res "Identification of Multiple Active Growth factors in Basement Membrane Matrigel Suggests Caution in Interpretation of Cellular Activity Related to Extracellular Matrix Components,". 202(1), 1-8 (Exhibit 83) |
| | Weintraub, et al., 1991 Science "The myoD Gene Family: Nodal Point During Specification of the Muscle Cell Lineage," 251:761-766 (Exhibit 84) |
| | Woodbury, et al., 2000 J. Neurosci. Res. Science "Adult Rat and Human Bone Marrow Stromal cells Differentiate Into Neurons," 61:364-370 (Exhibit 85) |
| | Young, 2000 Science "A Time for Restraint," 287:1424. (Exhibit 86) |
| | Zalin, RJ 1987 Exp. Cell Res. "The Role of Hormones and Prostanoids in the in Vitro Proliferation and differentiation of Human Myoblasts," 172:265-281. (Exhibit 87) |
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*Substitute Disclosure Statement Form (PTO-1449) Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

| FORM 1449* | Docket Number | Application Number | | |
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| INFORMATION DISCLOSURE STATEMENT | Applicant Fraser et al. | | | |
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| | | U.S. PA | TENT DOCUMENTS | | | | | |
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| FOREIGN PATENT DOCUMENTS | | | | | | | | |
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| 6 | | * | | | | YES | NO | |
| | OTHE | R DOCUMENTS (Includi | ing Author, Title, Date | , Pertinent Page | es, Etc.) | | | |
| | osteob | m, Michael A., "Age-rel lasts," <i>Biochem J.</i> 333:7 | 87-794. (Exhibit 88) | | | | n | |
| | Nonex | Iisashi, et al., "A Preadip pression of GLUT-4 pro 59-375. (Exhibit 89) | | | | | Commun. | |
| | Mouse | ohr, David A. et al., "Tiss Adipocytes," <i>Biochem</i> . | Biophys. Res. Comun | . 1985 132:850 | -855. (Exhibit 9 | 0) | | |
| | | etz, S. et al., "Endoglin Is n Endothelial Cells," <i>J. E</i> | | | | Receptor ! | System in | |
| | | Theresa L. et al., "10,25 ol. Chem. 1983 258:4350 | | Receptors in C | Cultured Rat oste | oblast-lik | e Cells," | |
| | Enomoto, Hirayuki et al., "Cbfal Is a Positive Regulatory Factor in Chondrocyte Maturation," J. Biol. Chem. 2000 275:8695-8702. (Exhibit 93) | | | | | | | |
| | Herma | an, Ira M. and Patricia D s," J. Cell Biol. 1985 101 | 'Amore, "Microvascu | lar Pericytes Co | ntain Muscle an | d Nonmu | scle | |
| | Lucas, Paul A. et al., "Mesenchymal Stem Cells From Granulation Tissue," J. Cell Biochem, 1993 17E:122, R212 (Exhibit 95) | | | | | | | |
| | Majeska, Robert J. and Gideon A. Rodan, "The Effect of 1,25(OH) ₂ D ₃ on Alkaline Phosphates in Osteoblastic Osteosarcoma Cells," J. Biol. Chem. 1982 257:3362-3365. (Exhibit 96) | | | | | | | |
| | Periasamy, Muthu et al., "Regulation of myosin heavy-chain gene expression during sleletal-muscle hypertrophy," Biochem. J. 1989 257:691-698. (Exhibit 97) | | | | | | | |
| | Poliard, a. et al., "Controlled Conversion of an Immortalized Mesodermal progenitor Cell Towards osteogenic, Chondrogenic, or Adipogenic Pathways," J. Cell Biol. 1995 130;1461-1472. (Exhibit 98) | | | | | | | |
| | Price, is Ass (Exhi | Paul A. et al., "Matrix Gociated With The Organi bit 99) | LA Protein, A New 7 ic Matrix of Bone," E | -Carboxyglutan Iochem. Biophy | nic Acid-Contain s. Res. Commun | ning Prote 1., 1983 11 | in Which 7:765-771. | |
| | Trans | o, Thomas A. and Helen l plantation for Cell-media | ited Gene Therapy," J | . Cell Biol 1994 | 125:1275-1287 | . (Exhibit | 100) | |
| | Weiner, Francis R. et al., "Regualtion of collagen Gene Expression in 3T3-L1 Cells. Efects of Adipocyt Differentiation and Tumor necrosis Factor \alpha" Biochem 1989 28:4094-4099. (Exhibit 101) | | | | Adipocyte | | | |

| EXAMINER | DATE CONSIDERED |
|---|-----------------|
| EXAMINER: Initial if reference considered, whether or not citation is | |

conformance and not considered. Include copy of this form for next communication to the Applicant.

*Substitute Disclosure Statement Form (PTO-1449) Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

| FORM 1449° | Docket Number MA9658DtV | Application Number | |
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| INFORMATION DISCLOSURE STATEMENT IN AN APPLICATION | Applicant Fraser et al. | | |
| (Use several sheets if necessary) | Filing Date 7/7/o3 | Group Art Unit 373 (| |

| | | Williams, Irene H. and S. Esthimios Polakis, "Differentiation of 3T3-L1 Fibroblasts to Adipocytes The Effect Of Indomethacin, Prostaglandin E ₁ And Cyclic AMP On The Process of Differentiation," Biochem. Biophys. Res. Commun. 1977 77:175-186. (Exhibit 102) |
|---|---|---|
| | * | Wise, Leigh S. and Howard Green, "Participation of One Isozyme of Cytosolic Glycerophosphate Dehydrogenase in the Adipose Conversion of 3T3 Cells," J. Biol. Chem. 1979 254:273-275. (Exhibit 103) |
| | | Yoon, Kyonggeun et al., "Characterization of the Rat osteocalcin Gene: Stimulation of Promoter Activity by 1,25-Dihydroxyvitamin D ₃ ," <i>Biochem.</i> 1988 27:8521-8526. (Exhibit 104) |
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*Sub:titute Disclosure Statement Form (PTO-1449) Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

| FORM 1449* | MA9658001 | Application Number | |
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| INFORMATION DISCLOSURE STATEMENT IN AN APPLICATION | Applicant Fraser et al. | | |
| (Use several sheets if necessary) | Filing Date 7/7/03 | Group Art Unit | |

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|----------|-------------------------|----------|------------------|------------|----------|----------------|
| EXAMINER | DOCUMENT NO. | DATE | NAME | CLASS | 30000.00 | IF APPROPRIATE |
| INITIAL | 5,226,914 (Exhibit 105) | 07/13/93 | Caplan et al. | | | 11/16/90 |
| | 5,736,396 (Exhibit 106) | 04/07/98 | Bruder et al. | | | 01/24/95 |
| | 5,811,094 (Exhibit 107) | 09/22/98 | Caplan et al. | | | 04/11/95 |
| | 5,817,050 (Exhibit 108) | 10/06/98 | Klein | ļ. <u></u> | 1 | 05/29/97 |
| | 5,908,784 (Exhibit 109) | 06/01/99 | Johnstone et al. | | | 11/15/96 |

| | | FUREIGN PA | TENT DOCUMEN | | T | 50 4444 | |
|---|--------------------------|------------|--------------|--|----------|----------------|----|
| | DOCUMENT NO. | DATE | COUNTRY | CLASS | SUBCLASS | TRANSLATION | |
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| , | W097/18299 (Exhibit 110) | 05/22/97 | PCT | | | | Х |
| | W097/39104 (Exhibit 111) | 10/23/97 | PCT | | - | | Х |
| | W097/40137 (Exhibit 112) | 10/30/97 | PCT | | | | Х |
| | W097/41208 (Exhibit 113) | 11/06/97 | PCT | | | | X |
| | W098/20731 (Exhibit 114) | 05/22/98 | PCT | | | | Х |
| | WO98/32333 (Exhibit 115) | 07/30/98 | PCT | | | | Х |
| | WO98/51317 (Exhibit 116) | 11/19/98 | PCT | | | | × |
| | W099/01145 (Exhibit 117) | 01/14/99 | PCT | | | | × |
| | W099/03973 (Exhibit 118) | 01/28/99 | PCT | | | | X |
| | WO99/11789 (Exhibit 119) | 03/11/99 | PCT | | | | X |

| OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) |
|---|
| Bastard, J. P. et al., "A Mini-Liposuction Technique Adapted to the Study of Human Adipocyte Glucose Transport System," <i>Diabetologia</i> , 36(Suppl. 1):A135, 1993 (Exhibit 120) Caplan, Arnold I., "The Mesengenic Process," <i>Clinics in Plastic Surgery</i> , 21:429-35, 1994 (Exhibit 121) |
| Crandall, David L. et al., "Identification of Estrogen Receptor B RNA in Human Breast and Abdominal Subcutaneous Adipose Tissue," <i>Biochemical and Biophysical Research Communications</i> , 248:523-6, 1998 (Exhibit 122) |

| EXAMINER | DATE CONSIDERED |
|----------|--|
| | s in conformance with MPEP 609; draw line through citation if not in tocommunication to the Applicant. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE |

| FORM 1449* | Docket Number | Application Number | |
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| ÷., | MA9658 DW/ | 10/6/4,431 | |
| INFORMATION DISCLOSURE STATEMENT | Applicant | | |
| IN AN APPLICATION | Fraser et al. | | |
| | Filing Date | Group Art Unit | |
| (Use several sheets if necessary) | 7/7/03 | 3731 | |

| | OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) |
|-----------------|---|
| | Hauner, Hans et al., "Promoting Effect of Glucocorticoids on the Differentiation of Human Adipocyte Precursor Cells Cultured in a Chemically Defined Medium," <i>Journal of Clinical Investigation</i> , 84:1663-70, 1989 (Exhibit 123) |
| | Hauner H. et al., "Glucocorticoids and Insulin Promote the Differentiation of Human Adipocyte Precursor Cells into Fat Cells." Journal of Clinical Endocrinology and Metabolism, 64:832-5, 1987 (Exhibit 124) |
| | Johnson, P. R. et al., "Uncontrolled adipocyte proliferation is not the primary lesion in the genetically- obese Zucker rat." International Journal of Obesity, 5:563-70, 1981 (Exhibit 125) |
| | Killinger, D. W. et al., "Influence of Adipose Tissue Distribution on the Biological Activity of Androgens," Annals New York Academy of Sciences, 595:199-211, 1990 (Exhibit 126) |
| | Killinger, Donald W. et al., "The Relationship Between Aromatase Activity and Body Fat Distribution," Steroids, 50:61-72, 1987 (Exhibit 127) |
| | Lafontan, M. et al., "Réflexions sur une nouvelle approche de chirurgie plastique réparatrice: la réimplantation de fragments de tissu adipeux prélevés par liposuccion," <i>Ann. Chur. Plast. Esthet.</i> , 34:77-81, 1989 (Exhibit 128) |
| | Lam, Anson and Ronald Moy, "The Potential for Fat Transplantation," J. Dermatol. Surg. Oncol., 18:432-4, 1992 (Exhibit 129) |
| | Lecoeur, L. and J. P. Ouhayoun, "In vitro induction of osteogenic differentiation from non-osteogenic mesenchymal cells." Biomaterials. 18:989-93, 1997 (Exhibit 130) |
| -2 0 | Loncar, D., "Ultrastructural analysis of differentiation of rat endoderm in vitro. Adipose vascular-stromal cells induce endoderm differentiation, which in turn induces differentiation of the vascular-stromal cells into chondrocytes," J. Submicrosc. Cytol. Pathol., 24:509-19, 1992 (Exhibit 131) |
| | Novakofski, Jan E., "Primary Cell Culture of Adipose Tissue," <i>Biology of the Adipocyte: Research Approaches</i> , Van Nostrand Reinhold Company, NY, 1987 160-97 (Exhibit 132) |
| | Pedersen, S. B. et al., "Identification of oestrogen receptors and oestrogen receptor mRNA in human adjoined tissue," European Journal of Clinical Investigation, 26:262-9, 1996 (Exhibit 133) |
| · | Pettersson, Per et al., "Adipocyte Precursor Cells in Obese and Nonobese Humans," <i>Metabolism</i> , 34:808-12, 1985 (Exhibit 134) |
| | Ramsay, T. G. et al., "Pre-Adipocyte Proliferation and Differentiation in Response to Hormone Supplementation of Decapitated Fetal Pig Sera," J. Anim. Sci., 64:735-44, 1987 (Exhibit 135) |
| | Rubens, F. D. et al., "Tissue Factor Expression by Cells Used for Sodding of Prosthetic Vascular Grafts," Journal of Surgical Research, 72:22-8, 1997 (Exhibit 136) |
| | Smahel, J., "Aspiration lipectomy and adipose tissue injection: pathophysiologic commentary," European Journal of Plastic Surgery, 14:126-31, 1991 (Exhibit 137) |
| | Springhorn, Jeremy P. et al., "Human Capillary Endothelial Cells from Abdominal Wall Adipose Tissue: Isolation Using an Anti-Pecam Antibody," In Vitro Cellular & Developmental Biology-Animal, 31:473-81, 1995 (Exhibit 138) |
| | Tavassoli, Mehdi, "In Vivo Development of Adipose Tissue Following Implantation of Lipid-Depleted Cultured Adipocyte." Experimental Cell Research, 137:55-62, 1982 (Exhibit 139) |
| | Williams, John T. et al., "Cells Isolated from Adult Human Skeletal Muscle Capable of Differentiating into Multiple Mesodermal Phenotypes," <i>The American Surgeon</i> , 65:22-6, 1999 (Exhibit 140) |

| EXAMINER | DATE CONSIDERED |
|--|---|
| | |
| EXAMINER: Initial if reference considered, who | ether or not citation is in conformance with MPEP 609; draw line through citation if not in |
| conformance and not considered. Include copy | y of this form for next communication to the Applicant. |

*Substitute Disclosure Statement Form (PTO-1449)

Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

| FORM 1449* | Docket Number | Application Number |
|--|---------------|--------------------|
| | MA9658DIV | 10/614,431 |
| INFORMATION DISCLOSURE STATEMENT Applicant | | |
| IN AN APPLICATION | Fraser et al. | |
| | Filing Date | Group Art Unit |
| (Use several sheets if necessary) | 7/7/03 | 3731 |

| OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) |
|---|
| Williams, Stuart K. et al., "Liposuction-derived human fat used for vascular graft sodding contains endothelial cells and not mesothelial cells as the major cell type," <i>Journal of Vascular Surgery</i> , 19:916-23, 1994 (Exhibit 141) |
| Włodarski, Krzysztof H., "Section III. Basic Science and Pathology. Properties and Origin of Osteoblasts," Clinical Orthopaedics and Related Research, 252:276-93, 1990 (Exhibit 142) |
| Ahrens, Patricia Buckley et al., "Stage-Related Capacity for Limb Chondrogenesis in Cell Culture," Developmental Biology, 1977, 60:69-82 (Exhibit 143) |
| Alameddine, Hala S. et al., "Regeneration of Skeletal Muscle Fibers from Autologous Satellite Cells Multiplied In Vitro. An Experimental Model for Testing Cultured Cell Myogenicity," Muscle & Nerve, 1989, 12:544-55 (Exhibit 144) |
| Angele, P. et al., "Engineering of Osteochondral Tissue with Bone Marrow Mesenchymal Progenitor Cells in a Derivatized Hyaluronan-Gelatin Composite Sponge," <i>Tissue Engineering</i> , 1999, 5:545-53 (Exhibit 145) |
| Bailey, A. J. et al., "Age-Related Changes in the Biochemical Properties of Human Cancellous Bone Collagen: Relationship to Bone Strength," Calcified Tissue International, 1999, 65:203-10 (Exhibit 146) |
| Barghom, A. et al., "a-Smooth Muscle Actin Distribution in the Pulmonary Vasculature Comparing Hypoplastic and Normal Fetal Lungs," <i>Pediatric Pathology & Laboratory Medicine</i> , 1998, 18:5-22 (Exhibit 147) |
| Baylink, David J., "Glucocorticoid-Induced Osteoporosis," The New England Journal of Medicine, 1983, 309:306-8 (Exhibit 148) |
| Becerra, José et al., "Demineralized Bone Matrix Mediates Differentiation of Bone Marrow Stromal Cells In Vitro: Effect of Age of Cell Donor," <i>Journal of Bone and Mineral Research</i> , 1996, 11:1703-14 (Exhibit 149) |
| Beiser, Ian H. and Irvin O. Kanat, "Subchondral Bone Drilling: A Treatment for Cartilage Defects," Journal of Foot Surgery, 1990, 29:595-601 (Exhibit 150) |
| Breen, Ellen C. et al., *TGFß Alters Growth and Differentiation Related Gene Expression in Proliferating Osteoblasts in Vitro, Preventing Development of the Mature Bone Phenotype,* Journal of Cellular Physiology, 1994, 160:323-35 (Exhibit 151) |
| Bruder, Scott P. et al., "Bone Regeneration by Implantation of Purified, Culture-Expanded Human Mesenchymal Stem Cells," Journal of Orthopaedic Research, 1998, 16:155-62 (Exhibit 152) |
| Butnariu-Ephrat, Miriam et al., "Resurfacing of Goat Articular Cartilage by Chondrocytes Derived From Bone Marrow," Clinical Orthopaedics and Related Research, 1996, 330:234-43 (Exhibit 153) |
| Campion, Dennis R., "The Muscle Satellite Cell: A Review," Internationals Review of Cytology, 1984, 87:225-51 (Exhibit 154) |
| Caplan, Amold I., "Mesenchymal Stem Cells," Journal of Orthopaedic Research, 1991, 9:641-50 (Exhibit 155) |
| Caplan, Arnold I., "The Mesengenic Process," Clinics in Plastic Surgery, 1994, 21:429-35 (Exhibit 156) |
| Carranza-Bencano, A. et al., "Comparative Study of the Reconstruction of Articular Cartilage Defects with Free Costal Perichondrial Grafts and Free Tibial Periosteal Grafts: An Experimental Study on Rabbits," Calcified Tissue International, 1999, 65:402-7 (Exhibit 157) |

| EXAMINER | DATE CONSIDERED | |
|--|--|--|
| | | |
| EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in | | |
| conformance and not considered. Include copy of this form for next | communication to the Applicant. | |
| *Substitute Disclosure Statement Form (PTO-1449) | Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE | |

^{*}Substitute Disclosure Statement Form (PTO-1449)

| FORM 1449* | Docket Number | Application Number |
|-----------------------------------|--------------------|--------------------|
| | MA9658D (U/ | 10/6/4,431 |
| INFORMATION DISCLOSURE STATEMENT | Applicant | |
| IN AN APPLICATION | Fraser et al. | |
| (Use several sheets if necessary) | Filing Date 7/7/03 | Group Art Unit |

| OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) |
|---|
| Chen, Xiaoli et al., "Differentiation-dependent expression of obese (ob) gene by preadipocytes and adipocytes in primary cultures of porcine stromal-vascular cells," <i>Biochimica et Biophysica Acta</i> , 1997, 1359:136-42 (Exhibit 158) |
| Chimal-Monroy, Jesús and Lino Díaz de León, "Expression of N-cadherin, N-CAM, fibronectin tenascin is stimulated by TGF-β1, β2, β3 and β5 during the formation of precartilage condensations," The International Journal of Developmental Biology, 1999, 43:59-67 (Exhibit 159) |
| Deng, Weiwen et al., "In Vitro Differentiation of Human Marrow Stromal Cells into Early Progenitors of Neural Cells by Conditions That Increase Intracellular Cyclic AMP," Biochemical and Biophysical Research Communications, 2001, 282:148-52 (Exhibit 160) |
| Dennis, James E. et al., "A Quadripotential Mesenchymal Progenitor Cell Isolated from the Marrow of an Adult Mouse," Journal of Bone and Mineral Research, 1999, 14:700-9 (Exhibit 161) |
| Dias, Peter et al., "The Molecular Basis of Skeletal Muscle Differentiation," Seminars in Diagnostic Pathology, 1994, 11:3-14 (Exhibit 162) |
| Diefenderfer, David L. and Carl T. Brighton, "Microvascular Pericytes Express Aggrecan Message Which is Regulated by BMP-2," <i>Biochemical and Biophysical Research Communications</i> , 2000, 269:172-8 (Exhibit 163) |
| Eisenberg, Shlomo, "High density lipoprotein metabolism," <i>Journal of Lipid Research</i> , 1984, 25:1017-58 (Exhibit 164) |
| Fajas, Lluis, et al., "Transcriptional control of adipogenesis," Current Opinion in Cell Biology, 1998, 10:165-73 (Exhibit 165) |
| Famdale, Richard W. et al., "Improved quantitation and discrimination of sulphated glycosaminoglycans by use of dimethylene blue," <i>Biochimica et Biophysica Acta</i> , 1986, 883:173-7 (Exhibit 166) |
| Fülöp, Csaba et al., "Expression of Alternatively Spliced Epidermal Growth Factor-like Domains in Aggrecans of Different Species," <i>The Journal of Biological Chemistry</i> , 1993, 268:17377-83 (Exhibit 167) |
| Glowacki, J., "Influence of Age on Human Marrow," Calcified Tissue International, 1995, 56(Supp. 1):S50-1 (Exhibit 168) |
| Grigoriadis, Agamemnon E. et al., "Analysis of chondroprogenitor frequency and cartilage differentiation in a novel family of clonal chondrogenic rat cell lines," <i>Differentiation</i> , 1996, 60:299-307 (Exhibit 169) |
| Hardingham, Tim et al., "Studies on the Synthesis, Secretion and Assembly of Proteoglycan Aggregates by Chondrocytes," Matrices and Cell Differentiation, 1984, 151:17-29 (Exhibit 170) |
| Haynesworth, S. E. et al., "Cell Surface Antigen on Human Marrow-Derived Mesenchymal Cells are Detected by Monoclonal Antibodies," <i>Bone</i> , 1992, 13:69-80 (Exhibit 171) |
| Huss, Ralf, "Isolation of Primary and Immortalized CD34" Hematopoietic and Mesenchymal Stem Cells from Various Sources," Stem Cells, 2000, 18:1-9 (Exhibit 172) |
| Iwasaki, Motoki et al., "Regulation of Proliferation and Osteochondrogenic Differentiation of Periosteum- Derived Cells by Transforming Growth Factor-β and Basic Fibroblast Growth Factor," Journal of Bone and Joint Surgery, 1995, 77A:543-54 (Exhibit 173) |
| Katz, Adam J. et al., "Emerging Approaches to the Tissue Engineering of Fat," Clinics in Plastic Surgery, 1999, 26:587-603 (Exhibit 174) |

| EXAMINER | DATE CONSIDERED | |
|--|---|--|
| EXAMINER: Initial if reference considered, whether or not citation | is in conformance with MPEP 609; draw line through citation if not in | |
| conformance and not considered. Include copy of this form for next communication to the Applicant. | | |
| *Substitute Disclosure Statement Form (PTO-1449) | Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE | |

| FORM 1449* | Docket Number | Application Number |
|-----------------------------------|---------------|--------------------|
| | MA9658DIU | 10/6/4,431 |
| INFORMATION DISCLOSURE STATEMENT | Applicant | |
| IN AN APPLICATION Fraser et al. | | |
| | Filing Date | Group Art Unit |
| (Use several sheets if necessary) | 7/7/03 | 3731 |

| OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) |
|---|
| Kirsch, Thorsten and Klaus von der Mark, "Remodelling of collagen types I, II and X and calcification of human fetal cartilage," <i>Bone and Mineral</i> , 1992, 18:107-17 (Exhibit 175) |
| Kosher, Robert A. and Michael Solursh, "Widespread Distribution of Type II Collagen during Embryonic Chick Development," Developmental Biology, 1989, 131:558-66 (Exhibit 176) |
| Lazarus, Hillard M. et al., "Human Bone Marrow-Derived Mesenchymal (Stromal) Progenitor Cells (MPCs Cannot Be Recovered from Peripheral Blood Progenitor Cell Collections," <i>Journal of Hematotherapy</i> , 1997, 6:447-55 (Exhibit 177) |
| Leboy, Phoebe S. et al., "Ascorbic Acid Induces Alkaline Phosphatase, Type X Collagen, and Calcium Deposition in Cultured Chick Chondrocytes," <i>The Journal of Biological Chemistry</i> , 1989, 264:17281-6 (Exhibit 178) |
| Lee, Yun-Shain and Cheng-Ming Chuong, "Adhesion Molecules in Skeletogenesis: I. Transient Expression of Neural Cell Adhesion Molecules (NCAM) in Osteoblasts During Endochondral and Intramembranous Ossification," Journal of Bone and Mineral Research, 1992, 7:1435-46 (Exhibit 179) |
| Lennon, Donald P. et al., "Human and Animal Mesenchymal Progenitor Cells from Bone Marrow: Identification of Serum for Optimal Selection and Proliferation," In Vitro Cell. Dev. Biol Animal, 1996, 32:602-11 (Exhibit 180) |
| Lev, Robert and S. S. Spicer, "Specific Staining of Sulphate Groups with Alcian Blue at Low pH," J. Histochem. Cytochem., 1964, 12:309-10 (Exhibit 181) |
| Long, Michael W. et al., "Age-Related Phenotypic Alterations in Populations of Purified Human Bone Precursor Cells." The Journals of Gerontology, 1999, 54A:B54-62 (Exhibit 182) |
| Lucas, P. A. et al., "Isolation of Putative Mesenchymal Stem Cells from Rat Embryonic and Adult Skeletal Muscle," In Vitro Cell Dev. Biol., 1992, 28:154A (Exhibit 183) |
| MacDougald, Ormond A. and M. Daniel Lane, "Transcriptional Regulation of Gene Expression During Adipocyte Differentiation," Annu. Rev. Biochem., 1995, 64:345-73 (Exhibit 184) |
| Mullen, Richard J. et al., "NeuN, a neuronal specific nuclear protein in vertebrates," Development, 1992, 116:201-11 (Exhibit 185) |
| Nagle, R. B. et al., "Factor VII-Associated Antigen in Human Lymphatic Endothelium," Lymphology, 1987, 20:20-4 (Exhibit 186) |
| Nakahara, H. et al., "Bone and Cartilage Formation in Diffusion Chambers by Subcultured Cells Derived from the Periosteum," Bone, 1990, 11:181-8 (Exhibit 187) |
| Nakano, Hirotaka et al., "RT-PCR Suggests Human Skeletal Muscle Origin of Alveolar Soft-Part Sarcoma," Oncology, 2000, 58:319-23 (Exhibit 188) |
| O'Driscoll, Shawn W., "Current Concepts Review: The Healing and Regeneration of Articular Cartilage," Journal of Bone and Joint Surgery, 1998, 80A:1795-812 (Exhibit 189) |
| Olson, E. N. et al., "Know Your Neighbors: Three Phenotypes in Null Mutants of the Myogenic bHLH Gene MRF4," Cell, 1996, 85:1-4 (Exhibit 190) |
| Pairault, Jacques and Howard Green, "A study of the adipose conversion of suspended 3T3 cells by using glycerophosphate dehydrogenase as differentiation marker," <i>Proc. Natl. Acad. Sci. USA</i> , 1979, 76:5138-42 (Exhibit 191) |
| Park, S. R. et al., "Interconversion Potential of Clone Human Marrow Adipocytes In Vitro," Bone, 1999, 24:549-54 (Exhibit 192) |

| EXAMINER | DATE CONSIDERED | |
|--|-----------------|--|
| | | |
| EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in | | |
| conformance and not considered. Include copy of this form for next communication to the Applicant. | | |

^{*}Substitute Disclosure Statement Form (PTO-1449)

| FORM 1449° | Docket Number MA9658D1V (| Application Number 10/6/4, 4중 \ |
|--|---------------------------------|------------------------------------|
| INFORMATION DISCLOSURE STATEMENT IN AN APPLICATION | ATEMENT Applicant Fraser et al. | |
| (Use several sheets if necessary) | Filing Date 7/7/03 | Group Art Unit 3731 |

| OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) |
|---|
| Pettersson, Per et al., "Cells in Human Adipose Tissue Developing into Adipocytes," Acta Med Scand, 1984, 215:447-51 (Exhibit 193) |
| Pierelli, Luca et al., "CD34+/CD105+ cells are enriched in primitive circulating progenitors residing in the G0 phase of the cell cycle and contain all bone marrow and cord blood CD34+/CD38 ^{low-} precursors," British Journal of Haematology, 2000, 108:610-20 (Exhibit 194) |
| Price, Paul A., "GLA-Containing Proteins of Bone," Connective Tissue Research, 1989, 21:51-60 (Exhibit 195) |
| Price, Paul A. and Sharon A. Baukol, "1,25-Dihydroxyvitamin D ₃ Increases Synthesis of the Vitamin K-dependent Bone Protein by Osteosarcoma Cells," <i>The Journal of Biological Chemistry</i> , 1980, 255:11660-3 (Exhibit 196) |
| Probst, M. et al., "Homologous bladder augmentation in dog with the bladder acellular matrix graft," BJU International, 2000, 85:362-71 (Exhibit 197) |
| Richardson, J. B. et al., "Repair of human articular cartilage after implantation of autologous chondrocytes," The Journal of Bone and Joint Surgery, 1999, 81:1064-8 (Exhibit 198) |
| Rickard, David J. et al., "Isolation and Characterization of Osteoblast Precursor Cells from Human Bone Marrow," Journal of Bone and Mineral Research, 1996, 11:312-24 (Exhibit 199) |
| Samat, Harvey B. et al., "Neuronal nuclear antigen (NeuN): a marker of neuronal maturation in the early human fetal nervous system," Brain & Development, 1998, 20:88-94 (Exhibit 200) |
| Scott, Douglas M. et al., "Collagen Synthesis in Cultured Osteoblast-like Cells," Archives of Biochemistry and Biophysics, 1980, 201:384-91 (Exhibit 201) |
| Shalhoub, Victoria et al., "Downregulation of Cell Growth and Cell Cycle Regulated Genes during Chick Osteoblast Differentiation with the Reciprocal Expression of Histone Gene Variants," <i>Biochemistry</i> , 1989, 28:5318-22 (Exhibit 202) |
| Siffert, Robert S., "The Role of Alkaline Phosphatase in Osteogenesis," The Journal of Experimental Medicine, 1951, 93:415-26 (Exhibit 203) |
| Syrjälä, M. et al., "A flow cytometric assay of CD34-postitive cell populations in the bone marrow," British Journal of Haematology, 1994, 88:679-84 (Exhibit 204) |
| Tacchetti, C. et al., "In Vitro Morphogenesis of Chick Embryo Hypertrophic Cartilage," The Journal of Cell Biology, 1987, 105:999-1006 (Exhibit 205) |
| Tontonoz, Peter et al., "mPPARy2: tissue-specific regulator of an adipocyte enhancer," Genes & Development, 1994, 8:1224-34 (Exhibit 206) |
| Trayhum, P. and Margaret Ashwell, "Control of white and brown adipose tissues by the autonomic nervous system," The Proceedings of the Nutrition Society, 1987, 46:135-42 (Exhibit 207) |
| Vandenburgh, Herman H. and Patricia Karlisch, "Longitudinal Growth of Skeletal Myotubes In Vitro in a New Horizontal Mechanical Cell Stimulator," In Vitro Cellular & Developmental Biology, 1989, 25:607-16 (Exhibit 208) |
| Wakitani, Shigeyuki et al., "Mesenchymal Cell-Based Repair of Large, Full-Thickness Defects of Articular Cartilage," The Journal of Bone and Joint Surgery, 1994, 76A:579-92 (Exhibit 209) |
| Wakitani, Shigeyuki et al., "Myogenic Cells Derived from Rat Bone Marrow Mesenchymal Stem Cells Exposed to 5-Azacytidine," Muscle & Nerve, 1995, 18:1417-26 (Exhibit 210) |
| Weintraub, Harold et al. "Tissue-specific gene activation by MyoD: determination of specificity by cisacting repression elements," Genes & Development, 1994, 8:2203-11 (Exhibit 211) |

| EXAMINER | DATE CONSIDERED |
|---|--|
| conformance and not considered. Include copy of this form for nex | I s in conformance with MPEP 609; draw line through citation if not in the communication to the Applicant. |
| *Substitute Disclosure Statement Form (PTO-1449) | Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE |

| FORM 1449* | Docket Number | Application Number | | |
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| INFORMATION DISCLOSURE STATEMENT | Applicant | | | |
| IN AN APPLICATION | Fraser et al. | | | |
| · | Filing Date | Group Art Unit | | |
| (Use several sheets if necessary) | 7/1/03 | 3731 | | |

| | |
|------|--|
| | OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) |
| _ | Yoo, Jung U. and Brian Johnstone, "The Role of Osteochondral Progenitor Cells in Fracture Repair," Clinical Orthopaedics and Related Research, 1998, 355S:S73-81 (Exhibit 212) |
| | Young, Henry E. et al., "Human Pluripotent and Progenitor Cells Display Cell Surface Cluster |
| | Differentiation Markers CD10, CD13, CD56, and MHC Class-I (44365)," Proc. Soc. Exp. Biol. Med., 1999, 221:63-71 (Exhibit 213) |
| | Zezulak, Kathleen M. and Howard Green, "Specificity of Gene Expression in Adipocytes," Molecular and Cellular Biology, 1985, 5:419-21 (Exhibit 214) |
| | Zohar, R. et al., "Analysis of intracellular osteopontin as a marker of osteoblastic cell differentiation and mesenchymal cell migration," European Journal of Oral Sciences, 1998, 106(Supp. 1):401-7 (Exhibit 215) |
| | Zuk, Patricia Z. et al., "Multilineage Cells from Human Adipose Tissue: Implication for Cell-Based Therapies," Tissue Engineering, 2001, 7:211-28 (Exhibit 216) |
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*Substitute Disclosure Statement Form (PTO-1449)

Patent and Trademark Office; U.S

Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

| FORM 1449* | Docket Number Application Number MA9658内(リ) 10/6/4, 4月1 | | | |
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| INFORMATION DISCLOSURE STATEMENT IN AN APPLICATION | Applicant Fraser et al. | | | |
| (Use several sheets if necessary) | Filing Date 7/7/03 | Group Art Unit 3731 | | |

| U.S. PATENT DOCUMENTS | | | | | | | |
|-----------------------|--|---|---|---------------------|-----------------|---------------------------------------|-------------------------------|
| EXAMINER INITIAL | DOCUMENT | NO. | DATE | NAME | CLASS | SUBCLASS | FILING DATE IF APPROPRIATE |
| | | | FOREIGN | PATENT DOCUMEN | Te | | |
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| | DOCUMENT | NO. | DATE | COUNTRY | CLASS | SUBCLASS | TRANSLATION |
| | | | | | | | YES NO |
| : | | | R DOCUMENTS (Includi | | | | |
| | | | y, et al., 1985, "The Effe eded Hydroxyapatite Gro | | | | patite Formation |
| | | | r, Lisa, et al., 2000, "Isola chymal stem cells," Am. | | | | marrow-derived |
| | | of Rab (Exhil | egtse, Barbara, et al., 199 bit Marrow-derived Mes bit 219) | enchymal Progenitor | Cells," Journal | of Orthopaedic I | Research. 18:18-24. |
| | | Pathol | imayer, Thomas et al., 19 1. Immunopathol. 7:14-19 | . (Exhibit 220) | | _ | • |
| | Nakajima, I. et al., 1998, "Adipose tissue extracellar matrix: newly organized by adipocytes during differentiation," Differentiation 63:193-200. (Exhibit 221) | | | | | | |
| | | Zvaisler, et al., 2000, "Mesenchymal precursor cells in the blood of normal individuals," Arthritis Res. 2:477-488. (Exhibit 222) | | | | | |
| | Bond et al., 1999, "Human Subcutaneouspreadipocytes Differentiate Into osteoblasts," FASEB Journal 13:600A (Exhibit 225) | | | | | | |
| | Smith et al., 2000, "Mesenchymal Stem Cells Derived From Bone Marrow And Human Adipose Tissue Exhibit Multilineage Potential," Journal of Investigative Medicine, 95A. (Exhibit 226) | | | | | | |
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^{*}Substitute Disclosure Statement Form (PTO-1449) Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

| FORM 1449* | Docket Number | Application Number | | |
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| · | MA9658DIV/ | 10/6/4, 431 | | |
| INFORMATION DISCLOSURE STATEMENT | ATEMENT Applicant | | | |
| IN AN APPLICATION | Fraser et al. | | | |
| | Filing Date | Group Art Unit | | |
| (Use several sheets if necessary) | 7/7/03 | 3731 | | |

| | | U.S. PA | TENT DOCUMENTS | 3 | | | |
|------------------|---|---|---|------------------------|--------------------------------------|--------------------------|---------------------------------------|
| EXAMINER INITIAL | DOCUMENT NO. | DATE | NAME | CLASS | SUBCLASS | FILIN | G DATE |
| | 5,854,292 | December 29, 1998 (Exhibit 235) | Ailhaud et al. | | | | |
| | | 1 1 | PATENT DOCUMEN | ITC | <u></u> | <u> </u> | · · · · · · · · · · · · · · · · · · · |
| | 50011115117110 | | | | 1 0 100 100 | | |
| | DOCUMENT NO. | DATE | COUNTRY | CLASS | SUBCLASS | | SLATION |
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| | WO 99/28444 (Exhibit 223) | June 10, 1999 | PCT | | | | |
| | WO 99/02654 (Exhibit 224) | January 21, 1999 | PCT | | | | |
| | WO 00/53795 (Exhibit 231) | September 14, 2000 | PCT | | | | |
| | WO 01/62901 A2 (Exhibit 232) | August 30, 2001 | PCT | | | | • |
| | WO 01/21767 (Exhibit 233) | March 29, 2001 | PCT | | | | |
| | WO 97/26326 (Exhibit 236) | July 24, 1997 | PCT | | | | |
| | | R DOCUMENTS (Including | ng Author, Title, Date | , Pertinent Page | es, Etc.) | <u> </u> | |
| | abdom (Exhil Strutt | ower et al., 1999, "Stroma ninoplasty fat for autologo bit 227) et al., 1996, "Growth and ular Medicine: Human C | ous transfer to aged s | kin," <i>Dermatolo</i> | ogic Surgery, 25: | 12:945-94 | |
| | Tavas | soli et al., 1981, "The Nat rch, 29:5:871A. (Exhibit | ure of Fibroblasts D | | | /itro," <i>Cli</i> | nical |
| | Van e | t al., 1978, "Complete Dif bit 230) | | ocyte Precursor | s," Cell Tissue, 1 | 95:317-32 | 9. |
| | Soda, | Soda, et al., 1983, "Adipocyte stem cell: A brief review," Int. J. of Cell Cloning, 1:79-84. (Exhibit 234) | | | | | |
| | Ailhaud, et al., 1983, "Hormonal requirements for growth and differentiation of OB17 preadipocyte in vitro," Diabete & Metabolisme, Vol. 9:125-133. (Exhibit 237) | | | | | ocyte cells | |
| | Ailhai | Ailhaud, et al., 1985, "Lipoprotiene lipase et differenciation adipocytaire," Reprod. Nutr. Develop., Vo. 25:153-158. (Exhibit 238) | | | | | elop., Vol. |
| | Biolog | Zuk, Patricia A. et al., "Human Adipose Tissue Is A Source Of Multipotent Stem Cells," Molecular Biology of the Cell, 2002, 13:4279-4295. (Exhibit 239) | | | | | |
| | (Exhi | e, Jeffery M. et al., "Adip bit 240) | | • | | | |
| | Saffor cells," | d, Kristine M. et al., "New Biochemical and Biophy | urogenic differentiati sical Research Comi | ion of murine ar | id human adipose 02, 371-379. (Ex | -derived : hibit 241) | stromal |

| EXAMINER | DATE CONSIDERED | | |
|--|-----------------|--|--|
| EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in | | | |

conformance and not considered. Include copy of this form for next communication to the Applicant.

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